845 one of Mulenga's sons died, after giving birth to quintuplets, some thirty years ago. Deformed children are buried alive. A large number of children is always hoped for and where polygamy is practised, some families are of considerable size, although the mortality [165] among young children is very high. It is, of course, very difficult to state the child-bearing period among natives. It does not start as early as is commonly supposed, and I think the menopause is found within about the same limits as among Europeans.

Death. Natives of Nyasaland live to a good old age. That such is not the case I have 747 found to be one of the many fallacious beliefs concerning natives which should be relegated 165 to the realm of exploded theories, as I have pointed out elsewhere.[1]

Death in old age is recognized as a natural event but apart from this, all sickness and [194] death were formerly and are still to a large extent looked upon as the result of the machinations of some person, an idea which forms the outstanding feature in their belief in witchcraft, sorcery.[2]

Here I shall mention the ordinary customs in the case of death. During the last hours 73 of a mortal illness, a man is tended by his wife or wives; the head wife sits constantly supporting his head on her lap or against her breast. A woman is similarly tended by her mother, sisters, and friends. As unconsciousness sets in and the extremities become cold, they say, "His spirit has gone and only the heart remains alive."

The native does not like the idea of lingering on and a man on his death-bed will say to his sons, "Now watch me that I die quickly." He may take medicine to help him over that time or he may give his sons instructions as to what to do. Should a man linger unconscious for a long time, friends will ask his sons, "Did he give you any instructions?" If he has done so, the sons will then carry them out. This perhaps consists of building themselves in machilonas left by their father, while they stand on the roof of his house. Some- [205] times, the natives say of a lingering man, "Ah, perhaps he has eaten of a tortoise's heart!" Knowing the phenomenon of the tortoise's heart and believing that by partaking of it, the same property can be conferred on the heart of a man.

764 When death is manifest, the body is covered with a cloth by a brother, a son, or some [97] other person in attendance. The eyes are closed, the mouth shut, and at the present time, the body straightened out. This, however, is a recent practice copied from the Anyanja, Europeans, and Mohammedans.

764 News of the death must be sent to the chief, and a messenger goes to his village where 203 the chief and his people sit in the village open space. He carries a fowl in his hand. The present of a single fowl always denotes bad tidings. One of the chief's men, seeing the stranger approach with the single fowl, will jump up and take the bird. He is joined by the others and they go away to the cross-roads where they kill the fowl, pluck it, cook it and eat it. In the meantime, the messenger delivers his news to the chief who will produce from his house about eight yards of white calico; if the deceased has been a much respected

[1] Hugh H. Scanlon, "The Ma-ngoni of Angoni", (Lusaka, April 15, 1914, p. 1000). [2] This latter, p. 100.

3:Stanton D-5 (ca. 1912) 1922 FT? Yao FT?

Meaning "Though you are prosperous at the moment, do not make a show; all these things may pass away quickly," or *Kwishila ukwinjenjelile pasu!* "One should not rejoice openly."

30. *Wahle mwanke pa mtwe!*
They have eaten mwanke fruit on the head!

The intimate of a household who betrays the friendship of the husband by culpable intimacy with his wife is said "to eat mwanke fruit with the wife over the head of the husband." (Cf. French, *faire cocu.*)

39. *Mpanke wa kwishila unapikuwa kwishila w'isuwi!*
The arrow he is watching, it does not take long to reach the eye!

A man who looks on and does not take steps to stop an ill at the beginning will suffer heavily in the end.

39. *Mwanguwaniya lipenga!*
You kept me holding a stone!

You are late in your appointment; you have kept me waiting.

31. *Likale pilikwanila mkinji (or mkindimbi) likalikile!*
The jackal when he swallows mkinji fruit is confident; (i.e. a jackal knows he can void the seeds of this fruit).

Likalikile has the sense of when jumping over a stream, the jumper is sure of landing on the opposite bank. The expression used of a man means that he feels pretty sure to get through with what he is doing. (Note: Some in contradistinction to jackals are said to eat mwanke but always to expel the seeds from the mouth, as the seeds are sharp-pointed and very irritating. I have myself seen a man die from perforation of the bowel by these seeds.)

39. *(Akwete) ngwaka ngwaka wakikingi!*
(He has) mounting mounting of the bat!

Reference is made here to the habits of the bat which often makes a meal of figs and then flying to other trees, leaves its droppings under them also so that one might take them to be fig trees, too. The saying refers to a man who manages to involve a lot of others in his own trouble.

39. *Mapwiza akalapa mjiti*
The mouth-mongoose they (people) admire (the) footprints!

The mapwiza is a small rodent whose footprints may be seen all over the gardens in the morning, but seldom the animal itself. The meaning of the saying is, "If you are going to steal, it does not matter if you leave your footprints, but do not hang about and get caught!"

34. *Nkanda akawaza wamakolaka watumbi!*
Mr I-Must-Go-Well they no him hanged the mwindi!

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6: Mitchell E-5 (1946-1947) 1949 FT7 Yao FT7

included in the material that was prepared for Table IX. In this way it was possible to construct Table X which shows as close an approximation as we can get to the gross reproduction-rate from the material on hand.

Since the exact date of death was unknown (i.e. day and month) it was assumed that at death the women were at the *mid-point* of the age-group. Therefore the figure 198·5 in Table X represents, for example, 197, 198 women who passed through one particular year and 1 woman who died in that year.

The revised rates for the two five-year periods 1937–41 and 1942–6 are not greatly different from those calculated without taking account of the women who died. The average gross reproduction-rate over the ten-year period 1937–46 falls within the limits of expected gross reproduction-rate as calculated from the fertility ratio (2·47 to 2·99; see p. 303), and is not widely different from the estimate derived from women who have passed child-bearing (3·15; see p. 304).

(i) General Conclusions about the Gross Reproduction-rate

In general we may observe that from the material on hand the gross reproduction-rate for this sample has always been high. This is confirmed since, first, the number of live-born females born to women over the age of 50 is high (3·15); second, the lowest rate calculated for the past is 2·23 for 1932–6, though not too much reliance should be placed on the validity of this; and third, the rate calculated for the last five years which, since memories of dead children would still be fresh, is probably quite accurate, is 2·83.

With a sample as small as the one used in this survey a certain amount of variability is to be expected. Also since all ages are merely estimations based on the memory of informants, one can only expect approximations over fairly long periods of time. For this reason it is probably safer to use the *five-year average* 1942–6 as an indicator of the present gross reproduction-rate, or even the ten-year average 1937–46. In this case, we may estimate the present gross reproduction-rate at about 2·8 or 2·9.

4. The Net Reproduction-rate

Of course, no mortality statistics for the African population are available. Hence it is necessary to construct a make-shift survival table in order to arrive at some estimate of the net reproduction-rate. This is set out in Table XI. In this table I have assumed that the mean age of each five-year group is 3 years older than the lowest age in that group, i.e. the mean age of the 35–9 age-group is 38. It would have been more consistent to take this mean to be 37·5, but since the ages at death are not accurately known there seemed little point in doing this.

The problem then becomes: what proportion of girls born to mothers of average age 28 years (for example), i.e. to the 25–9-year age-group, will themselves survive to be 28 years of age?

In order to arrive at this proportion all the girls born between 1934 and 1943 who were recorded on family census forms were abstracted, i.e. 131. Of these 16 died before reaching the age of 4, so that we can assume that 89 per cent. survived to the age of 4 and over. For the mortality of the children between 4 and 8, those born between 1929 and 1938 were considered. There were 111 of these, but 14 died before reaching the age of 4. Hence we consider only 98 (as recorded in column iii

6: Mitchell E-5 (1946-1947) 1949 FT7 Yao FT7

of Table XI) as surviving to the age of 4 and beyond. Of these, 1 died before they turned 8 (see column v) which indicates a survival of 98 per cent. for this period. It will be remembered that 89 per cent. of all girls born alive survived to be 4 years old, and now we know that 98 per cent. of these lived to be 8 years old. Hence,

TABLE XI. *Survival Table: Females*

Year of birth of females	*Age-groups through which females have in years to nil. I have entered and passed (except if died)*	*No. of females entering age-groups*	*No. of females who died before passing out of age-group*	*No. of females who survived through age-group*	*Per cent. of females who survived age-groups*	*Survival-rate*	*Smoothed values*
i	ii	iii	iv	v	vi	vii	viii
1934-43	3 and under	131	16	133	89	89	91
1929-38	4 to 8	98	1	97	98	87	86
1924-33	9 to 13	65	1	64	98	85	84
1919-28	14 to 18	70	3	67	96	81	83
1914-23	19 to 23	66	0	66	100	81	81
1909-18	24 to 28	44	0	44	100	81	81
1904-13	29 to 33	28	1	27	96	77	77
1899-1908	34 to 38	13	1	14	93	71	71
1894-1903	39 to 43	11	1	10	91	64	66
1889-98	44 to 48	10	0	10	100	64	63

we can say that 89×98 = 87 per cent. of all children survive to be 8 years old (see column vii of Table XI). These points were then plotted and the curve smoothed by hand. Smoothed values for the mean ages, i.e. for 17·5, 22·5, &c., were then read off and are recorded in column viii of Table XI. These smoothed values represent the survival-rate over the last 13 years and may now be applied to the gross reproduction-rate for roughly the same period, i.e. for the period 1937-46 in Table IX. This is done in Table XII.

TABLE XII. *Net Reproduction-rate: Average 1937-46*

Age-group	*Specific fertility rates*	*Survival rates*	*Survival fertility rates*
i	ii	iii	iv
15-19	0·080	0·84	0·067
20-24	0·305	0·83	0·253
25-29	0·480	0·82	0·400
30-34	0·580	0·81	0·470
35-39	0·530	0·77	0·409
40-44	0·290	0·72	0·205
45-49	0·120	0·66	0·105
45-49	0·580	0·63	0·140
		Net reproduction-rate	2·149

The sum of column iv in Table XII (2·2) is the net reproduction-rate. This figure is admirably high, and we may look for the error in the possibility that some females who died are not recorded so that the mortality rate is underestimated. However, there seems to be sufficient evidence to conclude that the replacement rate is high.

6: Mitchell E-5 (1946-1947) 1949 FT7 Yao FT7

This is partly confirmed by the fact that the increase in total population for parts of the Liwonde district, with which this survey was concerned, according to the official census, is about 2·69 per cent. per annum.[1] At this rate we could expect the population to double itself in about 26 years. A net reproduction-rate of 2 would mean that the population would double itself in one generation which we may take in this case to be about 25 years. Some of the increase shown in the census is no doubt due to immigration from Portuguese East Africa, but the high replacement rate suggested by this material tends to confirm the opinion of one Administrative official, who maintained that immigration has virtually ceased since 1931.

5. General Summary and Conclusion

From material collected in three groups of hamlets in Liwonde district of Southern Nyasaland it appears that the average gross reproduction-rate within the sample over the last ten years was about 2·9 while the net reproduction-rate was about 2·2. There is no reason to suppose that the fertility of this sample is vastly different from that in any other part of the district, since the hamlets visited were casually selected; nevertheless, the sample is not a random one (in the statistical sense) and it is unsafe to generalize from it.

The Nyasaland Administration has only recently introduced machinery for the registration of births and deaths.[2] Until, therefore, these statistics are collected there seems to be no alternative but to rely on estimates as uncertain as those made in this paper.

[1] The population of Kawinga, Liwonde, and Nyambi sections of what was formerly known as Liwonde district or Upper Shire District of Nyasaland, increased from 39,154 in 1926 to 64,840 in 1945. Illustrated from the crude census returns in the D.C.'s office in Zomba.

[2] Actually the forms for this registration do not tabulate all the categories of information necessary for the calculation of the gross and net reproduction rates. Such omissions are mainly of the ages of the mothers and ages at death, and they have been excluded, no doubt, because it is assumed that this information is unobtainable. It is to be hoped, however, that when the system has become established, these categories will be introduced.

Résumé

MALÉDICTIONS DES NUER (see p. 288)

L'auteur cite de nombreux exemples des malédictions employées parmi les Nuer et indique l'importance comparative s'y attachant, suivant le degré de parenté entre la personne qui prononce la malédiction et celle à laquelle elle est destinée. La malédiction des morts est plus redoutée que celle des vivants, et l'on s'attend à ce qu'un homme qui emporte au tombeau le sentiment d'avoir subi une injustice fasse à son ennemi du mal affligeant plusieurs générations. Des malédictions prononcées n'affecteront que rarement le bétail puisque faire du mal au bétail nuit à toute la lignée et pas seulement à l'individu. Pour être efficaces, les malédictions n'ont pas besoin d'être exprimées en paroles — une imprécation silencieuse, ou même un sentiment de dépit, peuvent avoir la même force qu'une malédiction prononcée.